

**Remarks**

Claims 1, 3, 4, 6-9, 11 and 13-20 are pending in the application.

Claims 1, 3, 4, 6-9, 11 and 13-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Combs et al. (U.S. Patent No. 6,751,417 B1, hereinafter “Combs”) in view of Cook et al. (“Optical fiber access-perspectives toward the 21<sup>st</sup> century,” hereinafter “Cook”).

**Rejection Under 35 U.S.C. §103**

Claims 1, 3, 4, 6-9, 11 and 13-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Combs in view of Cook. The rejection is traversed.

Applicants note that the Examiner adheres to the rejection of claims 1, 3, 4, 6-9, 11 and 13-20 made in prior Office Actions. Thus, Applicants respectfully refer to all of Applicants’ previously submitted responses to the various Office Actions, the arguments of which are incorporated by references. In addition, Applicants address the present Office Action’s Response to Arguments as follows:

1. The Examiner highlights that the rejection of Applicants’ claims is based upon “the *combination* of teachings from Combs *and* Cook...” (See Office Action p. 8). Applicants well understand that the rejection is based upon the combination of references. However, under 35 U.S.C. §103, “a prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention.” (See MPEP 2141.02 (VI), quoting *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed.Cir. 1983), *cert. denied*, 469 U.S. 851 (1984)). Applicants understand that any active optical communication path will include passive components. However, viewing such components separately does not properly show a passive communication path. Combs as a whole clearly teaches an active downstream path. Thus, the Examiner’s selection of components from Combs is inconsistent with Combs’s teaching of an active downstream path. Thus, such an interpretation is contrary to the “as a whole” examination requirement.

2. The Examiner asserts that the Applicants “refer to an embodiment of Combs that is not employed in the standing rejection.” (See Office Action p. 8). Applicants’ remarks with respect to Point 1 are pertinent here as well. Specifically, the Examiner refers to only a segment of the communication path disclosed in Combs, ignoring the full downstream communication path depicted and described in the reference. The Examiner refers to the portion of Combs’s downstream communication path only up to the mini-fiber nodes mFN, while denying the full disclosure of an active downstream communication path. Again, such an interpretation is contrary to the “as a whole” examination requirement. This is true, even if Combs is to be combined with the disclosure of Cook.

3. Applicants respectfully disagree that an intermediate distribution site in Combs may qualify as a “termination at [a] customer premises,” as presented in Applicants’ claims. In addition to prior remarks in Applicants’ responses to various Office Actions, Applicants refer to the following definition provided in Federal Standards FED-STD-1037C 1996: Glossary of Telecommunications Terms—“service termination point: The last point of service rendered by a commercial carrier under applicable tariffs. Note 1: The service termination point is usually on the customer premises. Note 2: The customer is responsible for equipment and operation from the service termination point to user end instruments. Note 3: The service termination point usually corresponds to the demarcation point.” (available online at [http://www.its.bldrdoc.gov/fs-1037/dir-033/\\_4803.htm](http://www.its.bldrdoc.gov/fs-1037/dir-033/_4803.htm), provided by Institute for Telecommunications Sciences, U.S. Department of Commerce, National Telecommunications and Information Administration) (see also, ATIS Telecom Glossary 2007, available online at <http://www.atis.org/glossary/>). In view of the foregoing, the intermediate distribution sites (the mini-fiber nodes) of Combs are not termination points as taught and claimed by Applicants. Applicants note that their arguments do not solely rely upon definitions or standards; rather, the foregoing is provided for illustrative purposes.

4. It is not unclear to Applicants which portions of the references are allegedly being combined in maintaining the rejection of Applicants' claims. However, the Examiner has only reiterated which portions of the references have been selected by the Examiner for combination in order to reject Applicants' claims. It still has not been shown which portions of the references would make it obvious to select the combination of individual components of the references in the manner in which the Examiner has done so as to arrive at Applicants claims. The Examiner does allege that Cook suggests "movement towards digital baseband solutions is likely to encourage the adoption of an all fiber approach." (See Office Action p. 10, citing Cook p. 86 col. 1). However, Applicants respectfully submit that this disclosure is insufficient to provide the motivation to make all the necessary modifications to Combs and incorporate the portions of Cook selected by the Examiner.

Applicants understand that the teaching, suggestion, motivation (TSM) test is no longer the only applicable standard. However, it is still a substantially relevant factor in determining non-obviousness. Applicants respectfully submit that the references do not contain any teaching, suggestion or motivation to combine the references in such as way so as to arrive at Applicants' invention, as embodied in the claims. Furthermore, Applicants contend that the only instructions for how one could theoretically combine Combs and Cook to arrive at Applicants' claims are found in Applicants' own disclosure, and that the Office Action's alleged combination is based on impermissible hindsight.

5. Applicants refer to their prior remarks in response to earlier Office Actions.

6. The Examiner alleges that Cook "provides a practical instruction on how to implement the alternative configuration, i.e. remove active electronics." (See Office Action. p. 13). Applicants respectfully disagree and submit that the modifications are substantial and not disclosed in either of the references.

However, accepting the premise for the sake of argument, this only reinforces Applicants' prior remarks that Cook teaches away from Applicants invention. Specifically, Cook teaches away from Applicants' invention, as a whole, because Cook is critical of active systems (that is, systems with active components in the communication path). (See Cook p. 80-81, Section titled "Deployment Issues and Teleco Pans"). Notably, Applicants teach and claim an active upstream communication path from the customer premises to the central office.

Applicants also note that Combs is an active system in both upstream and downstream communication paths. Thus, Applicants submit that it is improper to replace the active downstream communication path of Combs with the allegedly all fiber passive optical downstream communication path of Cook, while at the same time leaving the active upstream components of Combs in the alleged combination of Combs and Cook.

7. Applicants refer to their prior remarks in response to earlier Office Actions and their comments in Point 6 above.

8. The Examiner alleges that Applicants' "citations from Cook are contextual" and that Combs is the starting point for the rejection, not Cook. (See Office Action p. 15). Respectfully, Applicants object to the Examiner's approach in evaluating Applicants' claims under 35 U.S.C. §103.

Again, "a prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention." (See MPEP 2141.02 (VI)). This applies to both Combs and to Cook; in particular, the portions of Cook that are critical of active communication paths. See, for example, Cook p. 80-81: "The drive [in the U.S.] has been to develop FTTC systems (ADS and PON) for general deployment in residential areas. Given the relatively low density of U.S. housing developments, this ideally requires very small active nodes to be deployed at the curb serving only 4 living units (LUs). The problems of engineering, installing powering and maintaining such large numbers of small nodes, and at the same time achieving acceptable whole life

costs, are particularly difficult...BT [British Telecom] studies have shown that the PON approach has greater benefits in minimizing the proportion of the per line cost incurred in deploying equipment at the exchange and in the fiber infrastructure down to the customer...The synergy between PON systems and SDH [synchronous digital hierarchy] is expected to grow.” (Emphasis added).

Given at least the foregoing, Combs and Cook cannot be appropriately combined under 35 U.S.C. §103 to reject Applicants’ claims.

Furthermore, the Examiner states: “The main difference between Combs and Applicant’s claimed invention is not the use of whether or not active and/or passive elements are employed, or even whether or not ‘Cook teaches away from Applicant’s system/method’. Rather, the main difference is the issue of the ‘distribution configuration to the customer premises’, as noted in the treatment of claim 1.” (See Office Action p. 15) (emphasis added). However, in addition to the requirement that “a prior art reference must be considered in its entirety, i.e., as a whole” (MPEP 2141.02 (VI)), the claimed invention (i.e. Applicants’ claimed invention) must also be considered as a whole. (See MPEP 2141.02 (I): “In determining the difference between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the difference themselves would have been obvious, but whether the claimed invention as a whole would have been obvious.”). “Distilling an invention down to the ‘gist’ or ‘thrust’ of an invention disregards the requirement of analyzing the subject matter ‘as a whole.’” (See MPEP 2141.02 (II)).

The “transmitting” (downstream) and “receiving” (upstream) clauses in Applicants claim 1, for example, cannot be analyzed completely separate but must be considered as a whole. In focusing on the “main difference” Applicants submit that the portions of the references teaching away from Applicants’ claims, in particular, the active upstream portions, are inappropriately ignored.

Thus, Applicants respectfully submit that the pending claims are not obvious in view of Combs and Cook.

For at least each of the foregoing reasons, the combination of Combs and Cook does not teach or suggest Applicant's invention of at least independent claims 1, 16 and 18. In addition, claims 3, 4, 6-9, 11, 13-15, 17 and 19-20 depend either directly or indirectly from independent claims 1, 16 and 18 respectively, and recite additional limitations. Accordingly, claims 3, 4, 6-9, 11, 13-15, 17 and 19-20 are also patentable under 35 U.S.C. 103(a) over Combs in view of Cook. Therefore, the rejection should be withdrawn.

**Conclusion**

It is respectfully submitted that all outstanding rejections have been overcome and this application is now in condition for allowance. Reconsideration and allowance are, therefore, respectfully solicited.

If, however, the Examiner still believes that there are unresolved issues, the Examiner is invited to call Eamon Wall at (732) 842-8110 so that arrangements may be made to discuss and resolve any such issues.

Respectfully submitted,

Dated: \_\_\_\_\_

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